

L 12436-63

EW(P(j))/EPF(c)/ENT(m)/BDS ASD PC-L/Pr-L RM/WW

ACCESSION NR: AP0001156

S/0190/63/005/006/0246/0849

68
67

AUTHOR: Kocheshkov, K. A.; Kargin, V. A.; Sheverdina, N. I.; Sogolova, T. I.;
Paleyeva, I. I.; Paleyev, O. A.

TITLE: Polymers of ethylene prepared by means of organocadmium-titanium tetra-
chloride mixtures

SOURCE: Vy'sokomolekulyarnyye soyedineniya, v. 5, no. 6, 1963, 846-849

TOPIC TAGS: polymers, ethylene, organocadmium compounds, titanium tetrachloride,
polyethylene, dioxanates

ABSTRACT: The polymerization of ethylene was conducted in a reactor filled with
ethylene gas to which were added 300 ml of hexane and from 0.025 to 0.007 Mol/liter
of an organic cadmium compound, cooled to -30C, and followed by dropwise addition,
under constant stirring, of a titanium tetrachloride solution in hexane, in a ratio
C-Me/ TiCl₄ sub 4 = 1/1. The highest yields were obtained with (n-C sub 4 H sub 9)
sub 2 Cd and (p-CH sub 3 C sub 6 H sub 4) sub 2 Cd, and it was observed that com-
plexes of the cadmium compounds with dioxane were equally effective. In comparing
the polymerization processes conducted with diphenylcadmium and phenylcadmiumiodide
it was found that the yield of an essentially similar polyethylene amounted in the

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ACCESSION NR: AP3001156

latter case to only one-half of the one obtained with diphenylcadmium, thus revealing the equivalency of the same radicals in the organometallic component in the catalyst and the essential role played by their number. The obtained polyethylenes were essentially white powders. Thermomechanical studies were conducted on films obtained at 180-185C and 90-100 atm, which were stretched in one direction. It was found that the polymers possessed sufficiently high values of recrystallization stress and tensile strength and high stretch and softening point values, the latter in the 130-135C range. Orig. art. has: 2 tables.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-Chemical Institute)

SUBMITTED: 25Nov61

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 005

Cord 2/2

LODOCHNIKOVA, V.I.; PANOV, Ye.M.; KOCHESHKOV, K.A.

Para-anisil derivatives of the $ArPbX_3$ class. Zhur.ob.khim. 33 no.4:
1199-1201 Ap '63. (MIRA 16:5)

(Anisil)

(Lead organic compounds)

SLOVOKHOTOVA, N.A.; FAYZI, N.A.; ZEMLYANSKIY, N.N.; PANOV, Ye.M.;
KOCHESHKOV, K.A.

Structure of some organotin salts of carboxylic acids. Zhur.
ob. khim. 33 no.8:2610-2613 Ag '63. (MIRA 16:11)

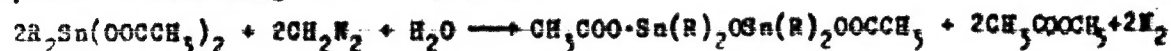
S/020/63/149/002/015/026
B1C8/B186

AUTHORS: Zenlyanskiy, K. E., Panov, Ye. M., Slovokhotova, E. A.,
Shamagina, O. P., Kocheshkov, K. A., Corresponding Member
AS USSR

TITLE: Stepwise formation of compounds with a stannoxane bond and
reactive end groups

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 2, 1963, 312 - 315

TEXT: It was found in earlier work (K. A. Kocheshkov et al. Izv. AN SSSR,
OKhN, 1961, no. 12, 2255) that the hydrolysis of the tin salts of organic
acids with a definite quantity of water in the presence of diazo alkanes
proceeds according to the equation



This process makes it possible to obtain linear compounds with active end
groups. It is shown here how, by varying the quantity of water and diazo
methane, it is possible to terminate the progression of reactions
monomer \longrightarrow dimer \longrightarrow tetramer \longrightarrow octamer \longrightarrow hexadecamer at any stage.

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Stepwise formation of compounds...

8/020/63/149/002/015/028
B108/B186

The infrared spectra of the compounds with a stannoxane bond were examined, the molecular weight, the temperatures of boiling, melting, and decomposition were determined. At slightly increased temperatures (40 - 45° C) it is possible to obtain stannoxanes also of higher molecular weight. There are 1 figure and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: November 22, 1962

Card 2/2

GOLOVANOV, I.B.; SIMONOV, A.P.; PISKUNOV, A.K.; TALALAYEVA, T.V.; TSAREVA,
O.V.; KOCHESKOV, K.A.

Nuclear magnetic resonance spectra and ebullioscopy of lithium
alcoholates. Dokl. AN SSSR 149 no.4:835-837 Ap '63. (MIRA 16:3)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korre-
spondent AN SSSR (for Kocheshkov).

(Lithium alcoholates--Spectra) (Ebullition)

RODIONOV, A.N.; TALALAYEVA, T.V.; SHIGORIN, D.N.; TYUMOFYUK, G.N.;
KOCHESHKOV, L.A.

Structure of complexes formed by aliphatic organolithium compounds.
Dokl. AN SSSR 151 no.5:1131-1134 Ag '63. (MIRA 16:9)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-
korrespondent AN SSSR (for Kocheshkov).
(Lithium organic compounds) (Chemical structure)

TALALAYEVA, T.V.; RODIONOV, A.N.; KOCHESHKOV, K.A.

Synthesis of deuterio-substituted organolithium compounds. Dokl.
AN SSSR 152 no.1:122-123 S '63. (MIRA 16:9)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-
korrespondent AN SSSR (for Kocheshkov).
(Lithium organic compounds) (Deuterium compounds)

VIKTOROVA, I.M.; SHEVERDINA, N.I.; DELINSKAYA, Ye.D.; KOCHESHKOV, K.A.

Organogallium compounds of the Ar_3Ga class and their dioxanates.
Dokl. AN SSSR 152 no.3:609-610 3 '63. (MIRA 16:12)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).

VASIL'YEVA, V.N.; KOCHESHKOV, K.A.

Photoisomerization of α, α' -difluorostilbene. Dokl. AN
SSSR 153 no.6:1325-1326 D '63. (NIRA 17:1)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova. 2. Chlen-
korrespondent AN SSSR (for Kocheshkov).

NESMEYANOV, Aleksandr Nikolayevich; SOKOLIX, Rosaliya Abramovna;
KOCHESHKOV, K.A., otv. red.; OKHLOBYSTIN, O.Yu., red.;
NOVICHKOV, N.D., tekhn. red.

[Methods of metallo-organic chemistry; boron, aluminum,
gallium, indium, thallium] Metody elementoorganicheskoi
khimii; bor, aluminii, galii, indii, tsvetnoi. Moskva,
Izd-vo "Nauka," 1964. 499 p. (MIRA 17:4)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).

TALALAYEVA, T. V.; TSAREVA, G. V.; SIMONOV, A. P.; KOCHESHKOV, K. A.

Synthesis and structure of soluble lithium alcoholates. Izv AN
SSSR Ser Khim no. 4:638-644 Ap '64. (MIRA 17:5)

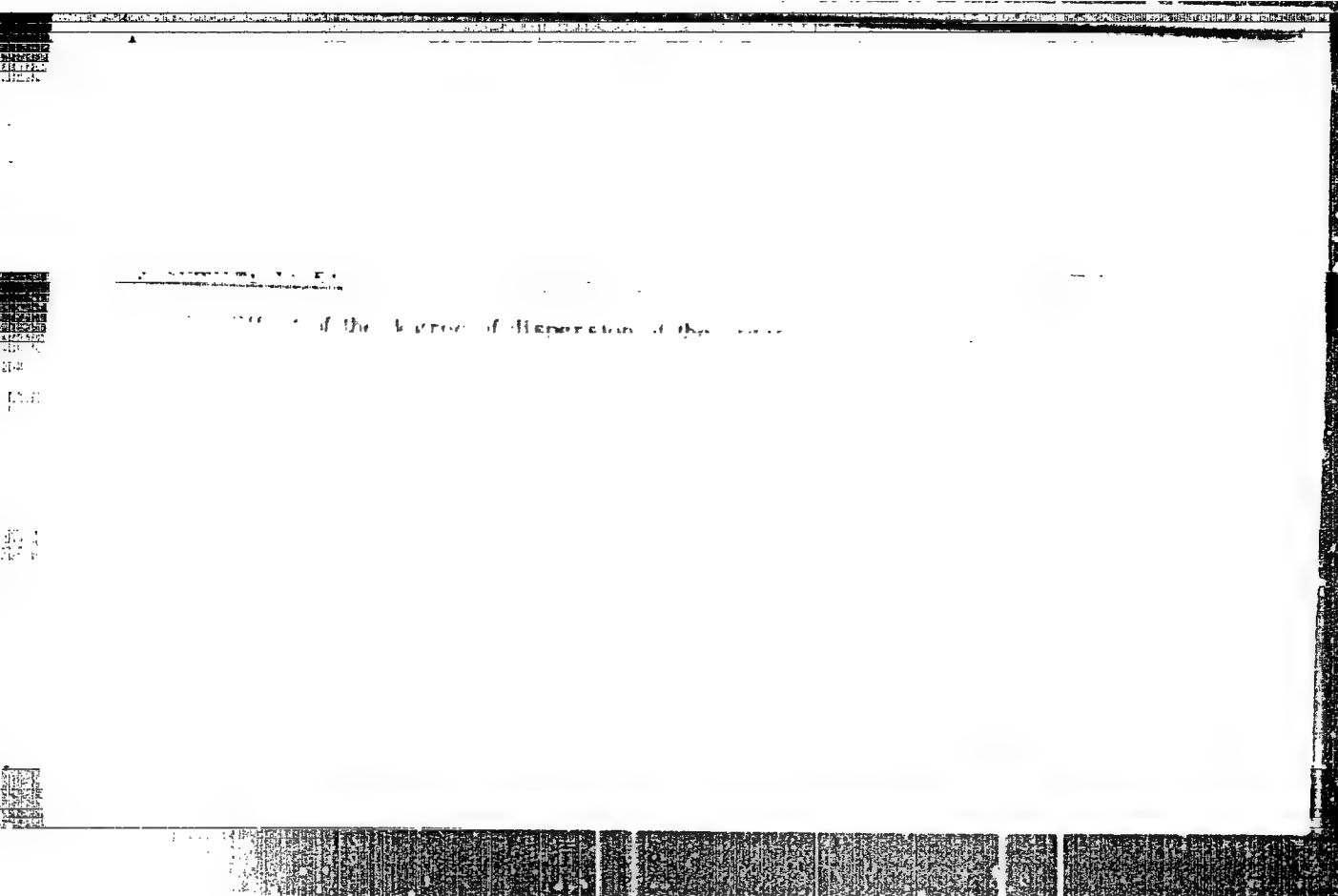
TALALAYEVA, T.V.; KOCHENKOV, K.A.

Method of synthesis of ethyllithium in argon atmosphere.
Izv.AN.SSR.Ser.khim. no. 5:855-860 Py '64. (MIRA 17:6)

1. Fiziko-khimicheskiy institut im.L.Ya.Karpova.

"APPROVED FOR RELEASE: 09/18/2001

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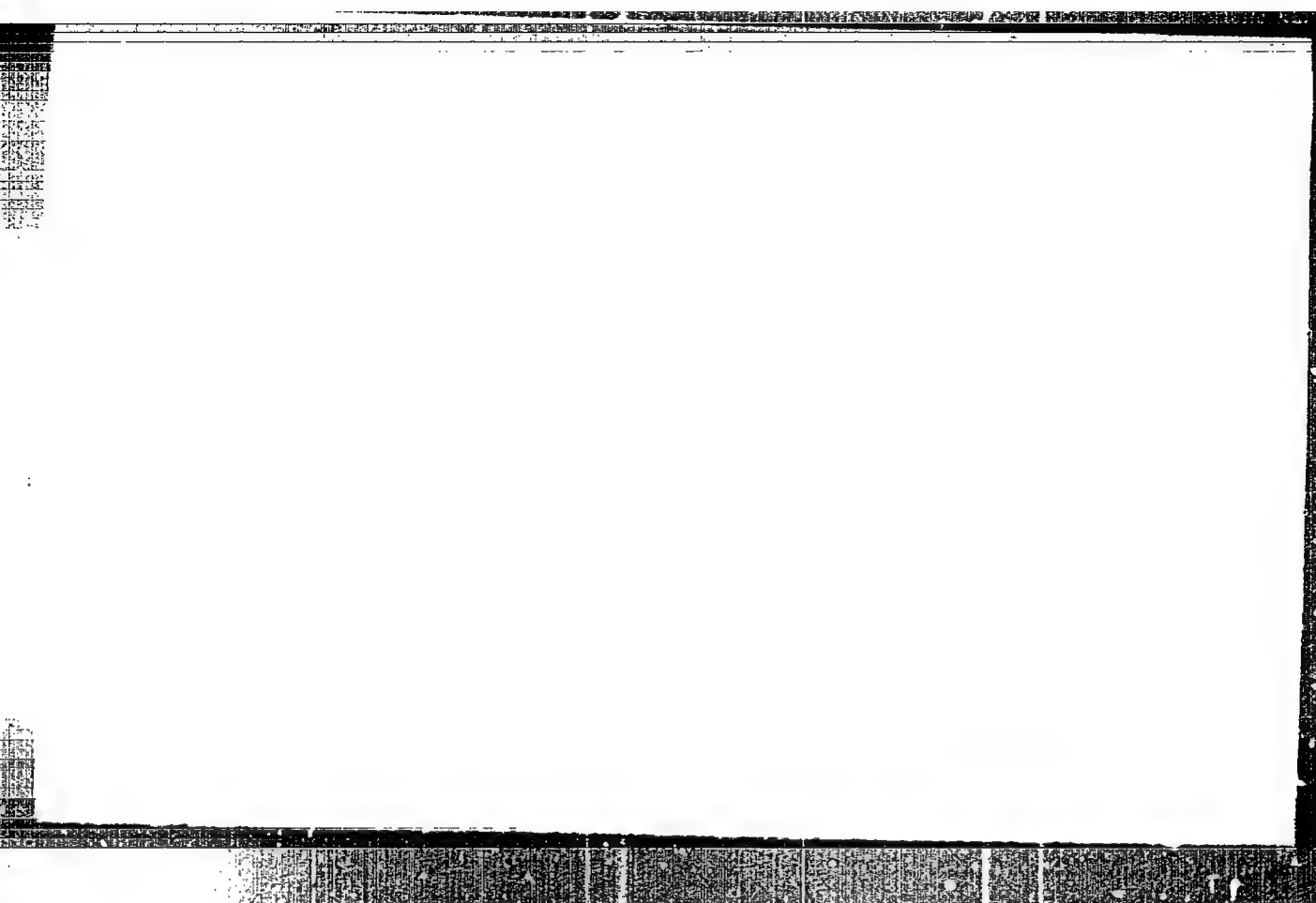


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APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723510012-0"

LODOCHNIKOVA, V.I.; PANOV, Ye.M.; KOCHENKOV, K.A.

Reactivity of ArPbX_3 compounds. Reaction with $(\text{C}_6\text{H}_5)_3\text{Sb}$.
Zhur. ob. khim. 34 no. 3:946-949 Mr '64. (MIRA 17:6)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova i Sverdlovskiy
gosudarstvennyy meditsinskiy institut.

TALALAYEVA, T.V.; RODIONOV, A.M.; KOCHESHKOV, K.A.

Mixed complexes of phenyllithium, methyllithium, n-butyllithium,
and lithium halides. Dokl. AN SSSR 154 no.1:174-177 Ja'64.

(MIRA 17:2)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova.

2. Chlen-korrespondent AN SSSR (for Kocheshkov).

TALALAYEVA, T.V.; PETRIY, O.P.; TIMOFEYUK, O.V.; ZIMIN, A.V.;
KOCHESHKOV, K.A.

Synthesis of α, α' -difluoro- α, α' -dialkyl ethylenes
by means of organolithium compounds. Dokl. AN SSSR
154 no.2:398-400 Ja'64. (MIRA 17:2)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova.
2. Chlen-korrespondent AN SSSR (for Kocheshkov)..

SHEVERDINA, N.I.; PALEYEVA, I. Ye.; ZAYTSEVA, N.A.; KOCHESKHKOVA, K.A.

Preparation of R_2Zn -type organozinc compounds in the aromatic, heterocyclic, and aliphatic-aromatic series by means of the Grignard reagent. Dokl. AN SSSR 155 no. 3:621-625, Apr '64. (MIRA 17:5)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).

ZEMLIANSKIY, N. N.; GOL'DSHTEYN, I. P.; GUR'YANOVA, Ye. N.; PANOV, Ye. M.; SLOVOKHOtova, N. A.; KOCHESHKOV, K. A.

Structure of compounds with a stannoxane bond studied by means of dipole moments and infrared spectra. Dokl. AN SSSR 156 no. 1:131-134 My '64. (MIRA 17:5)

1. Fiziko-khimicheskiy institut im. L. Ya. Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).

PALEYEVA, I.Ye.; SHEVERDINA, N.I.; KOCHESHKOV, K.A.

Asymmetric aromatic organotin and organocadmium compounds
of the type Ar^1HgAr^2 . Dokl. AN SSSR 157 no.3:626-628 Jl '64.
(MIRA 17:7)
1. Fiziko-khimiicheskiy institut imeni L.Ya. Varpova. 2. Chlen-
korrespondent AN SSSR (for Kocheshkov).

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CIA-RDP86-00513R000723510012-0"

PALEYEV, O.A.; KOCHESHKOV, K.A.; KARGIN, V.A.; SOGOLOVA, T.I.; BYCHKOVA, V.F.

Effect of the dispersity of the metallo-organic component of a
mixed catalyst on the polymerization of ethylene. Vysokom. soed.
6 no.11:1955-1958 N '64 (MIRA 18:2)

1. Fiziko-khimicheskiy institut imeni Karpova, Moskva.

RODIONOV, A.N.; TIMOFTEYK, G.V.; TALALAYEVA, T.V.; SMIGORIN, D.N.;
KOCHESHKOV, K.A.

Infrared spectra of some acetylides of lithium, sodium, and
potassium. Izv. AN SSSR Ser. khim. no.1:42-46 '65.

(MIRA 18:2)

1. Fiziko-khimicheskiy Institut im. L.Ya. Karpova.

ZEMLYANSKIY, N.N.; LUDOVICHUK V.N.; FANOV, Ye.M.; KOCHESHEV, K.A.

Synthesis of plumbocenes of the $(\text{ROCOFbAr}_2)_2\text{O}$ type. Zhur. ob.
khim. 35 no.5:843-45 My '65. (MIRA 18,6)

1. Fiziko-khimicheskiy institut imeni Karpova, Moskva.

ZEMEYANSKIY, N.N.; FANOV, Ye.M.; SHAMAGINA, D.P.; KOCHESHKOV, Y.A.

Synthesis of tin oxanes $\text{ROO}[\text{Sn}(\text{C}_4\text{H}_9)_2\text{O}]_n\text{R}$ OCR. Zhur. ob. khim.
35 no.6:1029-1031 Je '65. (MIRA 18:6)

1. Fiziko-khimiicheskiy institut imeni Karpova.

LODOCHNIKOVA, V.I.; PANOV, Ye.M.; KOCHESHIKOV, K.A.

Para-ic^o phenyl derivatives of the aryl lead triester type.
Zhur. ob. khim. 34 no.12:4022-4024 D '64 (MIRA 18:1)

1. Fiziko-khimicheskiy institut imeni L. Ya. Karpova i Sverdlovskiy gosudarstvennyy meditsinskiy institut.

KOTON, M.M.; KOCHESHKOV, K.A.; GORSHKOVA, I.A.; DOKUKINA, A.F.; PANOV, Ye.M.

Copolymerisation of α,β,β -halo-substituted p-divinylbenzenes with styrene. Dokl. AN SSSR 158 no.5:1120-1122 O '64.

(MIRA 17:10)

1. Institute vysokomolekulyarnykh soyedineniy AN SSSR, Leningradskiy politekhnicheskoy institut im. M.I.Kalinina i Fiziko-khimicheskoy institut im. L.Ya.Karpova. 2. Chleny-korrespondenty AN SSSR (for Koton, Kocheshkov).

PALEYEVA, I.Ye.; SHEVERDINA, N.I.; ABRAMOVA, L.V.; KOCHESHKOV, K.A.

Chemical composition of the "Maise reagent". Dokl. AN SSSR
159 no.3:609-611 N '64 (MIRA 18:1)

1. Fiziko-khimicheskiy institut imeni L. Ya. Karpova 2. Chlen
korrespondent AN SSSR (for Kochesnikov).

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CIA-RDP86-00513R000723510012-0

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723510012-0"

SHEVERDIN, Nataliya Ivanovna; KOCHESHKOV, Ksenofont Alekandrovich,
Prinimala uchastiye ABRAMOVA, L.V.; NESHCHAYANOV, A.N.,
akademik, otv. red.; RODIONOV, A.N., red.

[Methods of the chemistry of organometallic compounds;
zinc, cadmium] Metody elementno-organicheskoi khimii; tsink
kadmi. Moskva, Nauka, 1964. 235 p. (MIRA 18:2)

AVERBUKH, B.S.; ABRAMOVA, L.V.; BREGER, A.KH.; VAYNSHTEYN, B.I.; GOL'DIN, V.A.;
KOCHESHKOV, K.A.; SYRKUS, N.P.; SHALIAPIN, N.K.; SHEVERDINA, N.I.

Determination of the optimum conditions for the reaction of radiation-
chemical synthesis of dibutyltin dibromide. Zhur. fiz. khim. 38 no.10:
2445-2448 0 '64. (MIRA 18:2)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

PANOV, Ye.M.; SOROKINA, R.S.; KOCHESHKOV, K.A.

Fluorine-containing divinylbenzenes. Zhur. ob. khim. 35
no.8:1426-1429 Ag '65. (MIRA 18:8)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni
L.Ya. Karpova, Moskva.

GOL'DSHTEYN, I.P.; GUR'YANOVA, Ye.N.; KOCHESHKOV, K.A.

Polarity and strength of intermolecular bonds in complexes formed by tin tetrachloride with organic sulfides. Dokl. AN SSSR 161 no.1: 111-114 Mr '63. (MIRA 18:3)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).

RODIONOV, A.N.; TALALAYEVA, T.V.; ZHIGORIN, D.N.; RODIONOVA, O.N.;
KOCHESHKOV, K.A.

Infrared spectra of isotope-substituted ethyllithium molecules.
Izv. AN SSSR. Ser. khim. no.4:604-610 '65. (MIRA 18:5)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova.

SOROKINA, R.S.; PANOV, Ye.M.; KOCHESHIKOV, K.A.

Synthesis of styrenes with fluorine in the vinyl group and
organometallic substituents in the ring. Zhur. ob. khim.
35 no.9:1625-1628 S '65. (MIRA 18:10)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

GOLOVIN, YE. I.; GOLITSKY, N.M.; SHAMAGIN, I.B.; SHCHERBA, Ye.N.;
LITVIN, Ye.N.; LITVINENKO, N.I.; KUCHENKO, Ye.I.

Organotin compounds of a new type. Dokl. Akad. Nauk SSSR
no. 4188 (1982) 161. (MIRA 18:8)

J. Chem.-Korrespondent M. S. R. (for Kochashkev).

MAKAROVA, Lyubov' Gennadiyevna; NESMEYANOV, Aleksandr Nikolayevich;
KOCHESHKOV, K.A., otv. red.; RODIONOV, A.N., red.

[Methods of organometallic chemistry; mercury] Metody
elementoorganicheskoi khimii; rtut'. Moskva, Nauka, 1965.
438 p. (MIRA 18:7)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).

L 17714-66 EWP(j)/EWT(m)/T EM

ACC NR: AP6003405

(A)

SOURCE CODE: UR/0190/66/008/001/0008/0010

AUTHORS: Paleyev, O. A.; Sheverdina, N. I.; Sogolova, T. I.; Paleyeva, I. Ye.;
Kargin, V. A.; Kocheshkov, K. A.

ORG: Physico-Chemical Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Application of $(n-C_3H_7)_2Cd$, $n-C_3H_7CdCl$ and $n-C_3H_7CdI$ in polymerisation of ethylene

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 1, 1966, 8-10

TOPIC TAGS: polyethylene plastic, organocadmium compound, polymerization catalyst

ABSTRACT: In this work, $(n-C_3H_7)_2Cd$ (I), $n-C_3H_7CdCl$ (II), and $n-C_3H_7CdI$ (III) in mixtures with $TiCl_4$ were investigated as polymerization catalysts for propylene, substituting for the generally used organic aluminum compounds. This is an expansion of the earlier published study by the authors on organic cadmium compounds as components of mixed polymerization catalysts (Vysokomolek. soyed., 5, 846, 1963). II and III are white solids insoluble in n-hexane (solvent used in this polymerisation), have poorly developed surface structure and, therefore, are

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UDC: 66.095.26+678.742

L 17714-66

ACC NR: AP6003405

inefficient as catalysts. I is readily soluble in organic solvents and was found to be a very effective catalyst at very low concentrations (1 g mole per 11 kg of polyethylene). The product prepared with I (softening point 137--1390) has high tensile strength (4400--4500 kg/cm²), and may serve in the preparation of strong oriented films and fibers. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 28Jan65/ ORIG REF: 004/

OTH REF: 001

Card 2/2

net

SIMONOV, A.P.; SHICORIN, D.N.; TSAREVA, G.V.; TALALAYEVA, T.V.;
KOCHESHKOV, K.A.

Infrared absorption spectra and the structure of some simple
lithium, sodium, and potassium alcoholates. Zhur. prikl. spekt.
3 no. 6:531-537 D '65 (MIRA 19:1)

1. Submitted August 18, 1964.

PALEYEV, O.A.; SHEVERDINA, N.I.; SOGLOVA, T.I.; PALEYEVA, I. Ye.;
KARGIN, V.A.; KOCHESHKOV, K.A.

Using $(n-C_3H_7)_2Cd$, $n-C_3H_7CdCl$, and $n-C_3H_7CdI$ in ethylene polymeri-
zation. Vysokom. soed. 8 no. 1:8-10 Ja '66 (MIRA 19:1)

1. Fiziko-khimicheskiy institut imeni Karpeva. Submitted
January 28, 1965.

TALAYEVA, T.V.; PETRIY, O.P.; ZIMIN, A.V.; KOCHESHKOV, K.A.

Use of dilithium compounds for the synthesis of fluorinated
unsaturated compounds. Izv. AN SSSR. Ser. khim. no.8:1402-
1405 '65. (MIRA 18:9)

1. Fiziko-khimicheskiy institut im. A.Ya. Karpova.

L 5062-66 ENT(m)/EPF(c)/ENP(j) RPL WH/RM
ACCESSION NR: AP5025509

UR/0062/65/000/009/1607/1613
547.1'3+547.362+548.34

AUTHOR: Talalayeva, T. V.; Timofeyuk, G. V.; Rodionov, A. N.; Kocheshkov, K. A.

TITLE: Lithium acetylenides

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1965, 1607-1613

TOPIC TAGS: organolithium compound, acetylene, benzene, hexane, ether, lithium

ABSTRACT: The authors synthesized crystalline lithium acetylenides in benzene, hexane, and ether in the range of 0 to -50C, using acetylene alkylacetylenes, and solutions of ethyllithium, n-butyllithium, n-amyllithium, phenyllithium, and p-tolylithium. The products were analyzed for lithium, and their IR spectra were taken. In some cases, the compounds obtained were decomposed with heavy water, and the deuterated products were studied. It was thus shown that when acetylene reacts with solutions of organolithium compounds, lithium acetylenide is formed. When acetylene reacts with aliphatic organo-lithium compounds in hexane at 0 - 25C, crystalline lithium acetylenide is formed in 75 - 80% yield; when alkylacetylenes react with these compounds at -50C, lithium alkylacety-

L 5062-66

ACCESSION NR: AP5025509

lenides are formed in 75 - 90% yield. To refine the positions of the main bands in the IR spectra, isotope-substituted lithium acetylenides were synthesized by using lithium-6 and euterium, and the IR spectra of the products were recorded. Lithium acetylenide is stable on standing, apparently because stable complexes are formed between its molecules.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute) 44.55

SUBMITTED: 25Jun63

ENCL: 00

SUB CODE: OC, 6C

NO REF SOV: 009

OTHER: 012

Card 2/2 *nd*

L 3213-66 EWT(m)/ENP(j)/T/ENP(t)/ENP(b) IJP(c) JD/JM/RM

ACCESSION NR: AP5009223

S/0020/65/161/001/0111/0114 27

AUTHOR: Gol'dshteyn, I. P.; Gur'yanova, Ye. N.; Kocheshkov, K. A. 26
(Corresponding member AN SSSR)

TITLE: Polarity and strength of intermolecular bonds in complexes of tin tetrachloride and organic sulfides 13

SOURCE: AN SSSR. Doklady, v. 161, no. 1, 1965, 111-114

TOPIC TAGS: polarity, intermolecular bond, tin compound, tin tetrachloride, sulfide, heat of formation, sulfur containing compound, dipole moment 27

ABSTRACT: Measurements have been made of the heat of formation and dipole moments of complexes of tin tetrachloride with sulfur containing compounds. The dipole moments were determined by dielectrometric titration and the heats of formation by calorimetric titration. To obtain complexes with a 1:2 composition and a known cis-formation, compounds of the following type were used: $R-S-(CH_2)_n-S-R$ ($n = 1, 2, 3, 4, 5, 6$, or 10 , and $R = C_2H_5$ or C_4H_9). It was found that at small concentrations (0.03 g-mole/liter), compounds $SnCl_4 \cdot R-S-(CH_2)_n-S-R$, where $n = 1, 2$, or 3 , are monomers. Compounds

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L 3213-66

ACCESSION NR: AP5009223

with $n > 3$ are associated. Judging from the values of the dipole moments, such associated compounds have a cyclic structure. Experimental values of the heat of formation $-\Delta H$ (for one $\text{Sn} \dots \text{S}$ bond) and the dipole moments $\mu_{\text{Sn} \dots \text{S}}$ lie well on a straight line $\mu_{\text{Sn} \dots \text{S}} - (\Delta H_{\text{Sn} \dots \text{S}})$. Introducing a correction of ~ 1 kcal/mole into the experimental values of $-\Delta H$ to take account of the dissociation energy of the complex SnCl_4 from benzene, we can speak of a direct proportion between $-\Delta H_{\text{Sn} \dots \text{S}}$ and $\mu_{\text{Sn} \dots \text{S}}$. The above relationship is obviously general for π, σ -complexes of the donor-acceptor type. It appears that the bonds in compounds of this type are the result of an unshared electron pair in the donor molecule and of the vacant valence orbits in the acceptor molecule. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
(Physicochemical Institute)

SUBMITTED: 03Oct64

ENCL: 00

SUB CODE: IC, 00

NR REF SOV: 005

OTHER: 004

Card 2/2

KOCHESHKOV, S.M., inzh.

Increasing the power of a worm reducing gear restricted by
heating. Vest.mashinostr. 45 no.11:7-9 N '65.

(MIRA 18:12)

ROZANOV, N., insh.; ~~KOCHESHIKOV, V.~~ insh.; ROZENFEL'D, A., insh.;
MONFRED, Yu., kand.tekhn.nauk

Prefabricated large-panel apartment houses in the city of Vyksa.
Zhil.stroi. no.4/5:5-7 '58. (MIRA 12:6)
(Vyksa-Apartment houses)

CHURAYAN, A., kand. tekhn. nauk; IZHABUA, Sh., kand. tekhn. nauk;
KOCHESHKOV, Y., inzh.; MAL'TSEV, P., inzh.

Sealed joints of elements of earthquake-proof large-panel
buildings. Zhil. stroi. no.12:20-21 '62.

(MIRA 16:1)

(Earthquakes and building)
(Building Details)

NIKOL'SKIY, V.N., kand. tekhn. nauk; SPIVAK, N.Ya., kand. tekhn. nauk; BAULIN, D.K., inzh.; BUADZE, V.Sh., inzh.; KREYTan, V.G., kand. tekhn. nauk; PIRMYAKOV, S.I., kand. tekhn. nauk; USOV, A.L., inzh.; KOSHKIN, V.G., kand. tekhn. nauk; MARAVIN, B.L., inzh.; ERENBURO, A.I., inzh.; KOCHESHKOV, V.G., inzh.; RUBANENKO, B.R., glav. red.; ROZANOV, N.P., zam. glav. red.; OKUFRIYEV, I.A., red.; YUDIN, Ye.Ya., red.; NASONOV, V.N., red.; ISIDOROV, V.V., red.; MAKARICHEV, V.V., red.; FINKINSHTEYN, B.A., inzh. red.;

[Prefabricated floor and ceiling structures] Poly i perekrytiia industrial'noi konstruktzii. Moskva, Gosstroizdat, 1963. 71 p. (MIRA 16:12).

1. Akademiya stroitel'stva i arkhitektury SSSR. Tsentral'nyy nauchno-issledovatel'skiy i eksperimental'no-proyektnyy institut industrial'nykh shilykh i massovykh kul'turno-bogatykh zdaniy. 2. Nauchno-issledovatel'skiy institut stroitel'noy fiziki i ogranichayushchikh konstruktzii (for Nikol'skiy, Usov). 3. Tsentral'nyy nauchno-issledovatel'skiy i eksperimental'no-proyektnyy institut industrial'nykh shilykh i massovykh kul'turno-bogatykh zdaniy (for Buadze, Baulin, Spivak, Kreytan, Kocheshkov). 4. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Krenburg).
(Floors) (Ceilings)

MOROZOV, N.V., kand. tekhn. nauk; MERTUMYAN, A.K., kand. tekhn. nauk; ANTIPOV, T.P., arkh.; KOCHESHKOV, V.G., insh.; LISAGOR, I.A., insh.; TSAPLEV, N.N., insh.; IVASHKOVA, V.K., kand. tekhn. nauk; SHIKUNOV, I.Ya., insh.; FILIN, Yu.D., insh.; MOSTAKOV, V.I.; BURLACHENKO, P.Ye., kand. khim. nauk[deceased]; PANKRATOV, V.F., insh.; RUBANENKO, B.R., glav. red.; NOZANOV, M.P., zam. glav. red.; ONUFRIYEV, I.A., red.; YUDIN, Ye.Ya., red.; NASONOV, V.N., red.; ISIDOROV, V.V., red.; MAKARICHEV, V.V., red.; POLUBNEVA, V.I., red.

[Ways of improving design details for the seams of exterior wall slabs] Puti uluchsheniia konstruktivnykh reshenii stykov panelei naryzhnykh sten. Moskva, TSentr. biuro tekhn. informatsii i nauchno-issl. in-ta organizatsii, mekhanizatsii i tekhn. pomoshchi stroit., 1962. 78 p. (MIRA 16:8)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut industrial'nykh zhilykh i massovykh kul'turno-bytovykh zdaniy (for TSaplev). 2. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR, Perovo (for Mostakov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Pankratov).

(Walla)

KOCHETKOV, A.

Die Englisch-Amerikanische Rivalität Auf Den Westeuropäischen Märkten. Berlin,
Die Wirtschaft, 1954.

246 P. Tables.

Translation From The Russian: Angloamerikanskoye Sopernichestvo Na Rynkakh
Zapadnoy Evropy, Moscow, 1952.

SC: 224/6
122.36
.K7

KRASIK, L.B., dotsent; KUZNETSOVA, N.K.; OLIXINA, N.I.; VORONOVA, A.N.;
KOCHENKOVA, Z.Y.

Organisation and work of sections for premature infants in children's
hospitals in the city of Molotov. Vop.okh.mat. i det. 1 no.6:60-64
N-D '56. (MLA 10:1)

1. In kafedry pediatrii (ispolnyayushchiy obyazannosti zaveduyushchego
dotsent L.B.Krasik) Molotovskogo meditsinskogo instituta (dir. - prof.
I.I.Kositsyn)
(MOLOTOV--INFANTS (PREMATURE))

Осипов, В. И.; Речистков, А. А.

Furnaces---Construction

Three-sectional furnace for burning cut raw peat. 1. Advantages of construction. 2. Performance of the furnace. Tekst. Prom., No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1957, Uncl.

2

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723510012-0

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723510012-0"

КОГНИТИВ, А.

Paper industry - exhibitions

Technical corner. Klub No. 8 14 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1957, Uncl.

2

КОЧЕТКОВ, А.

Striving for industrial safety. Okh. truda i sts. strakh. no.6:7-10
Ja '59. (MIRA 12:10)

1. Zaveduyushchiy otdelom okhrany truda Tsentral'nogo komiteta profsoyuzov
rabochikh lesnoy, dremesnoy i derevoobrabatывayushchey promyshlennosti.
(Wood-using industries--Safety measures)

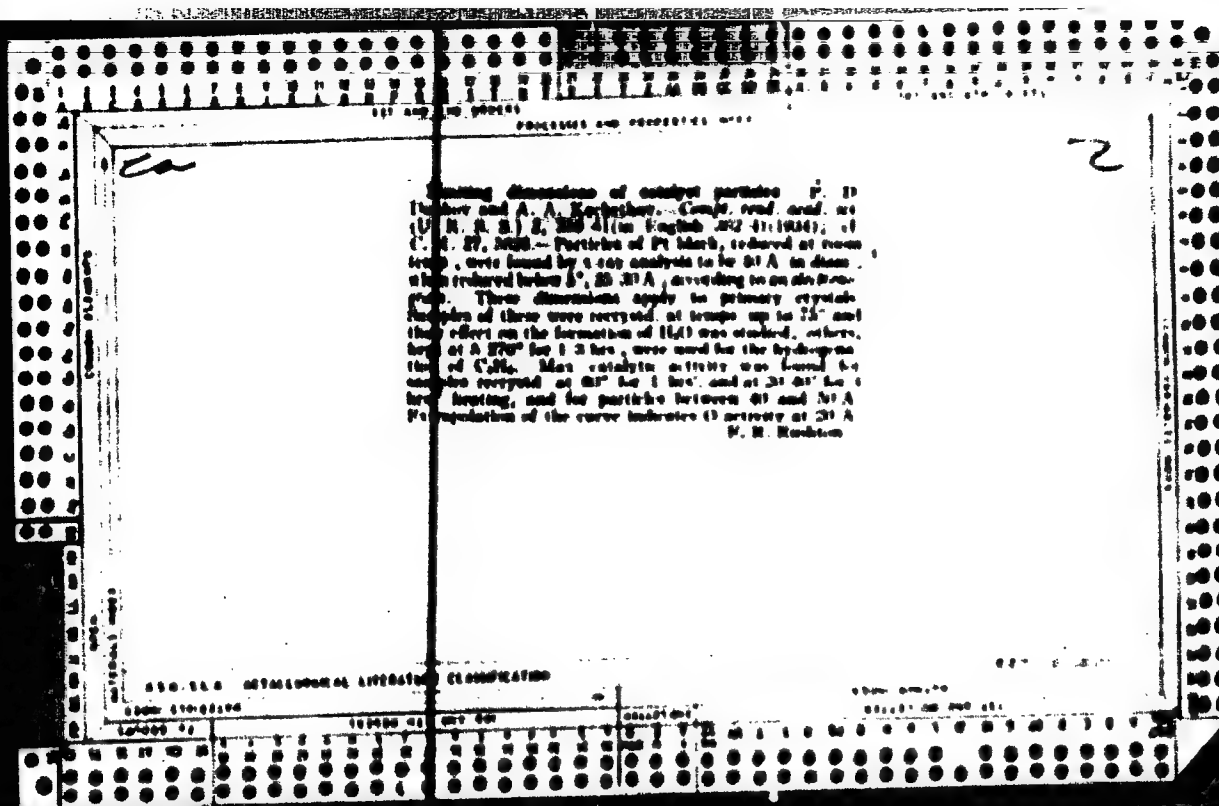
KOCHETKOV, A.

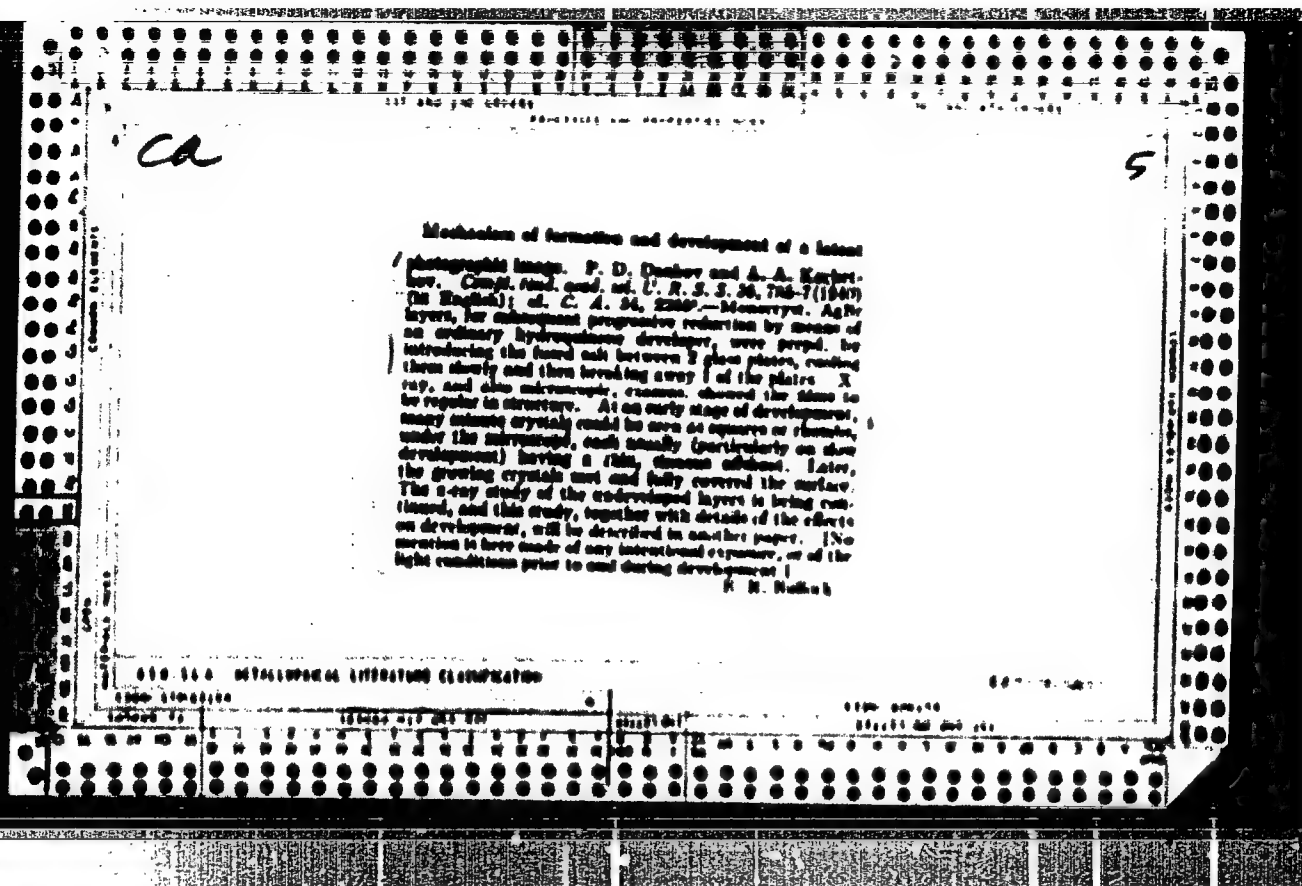
Machinery and equipment for livestock farms. Nauka i pered.
op.v sel'khes. 9 no.8:38-40 Ag '59. (MIRA 12:12)

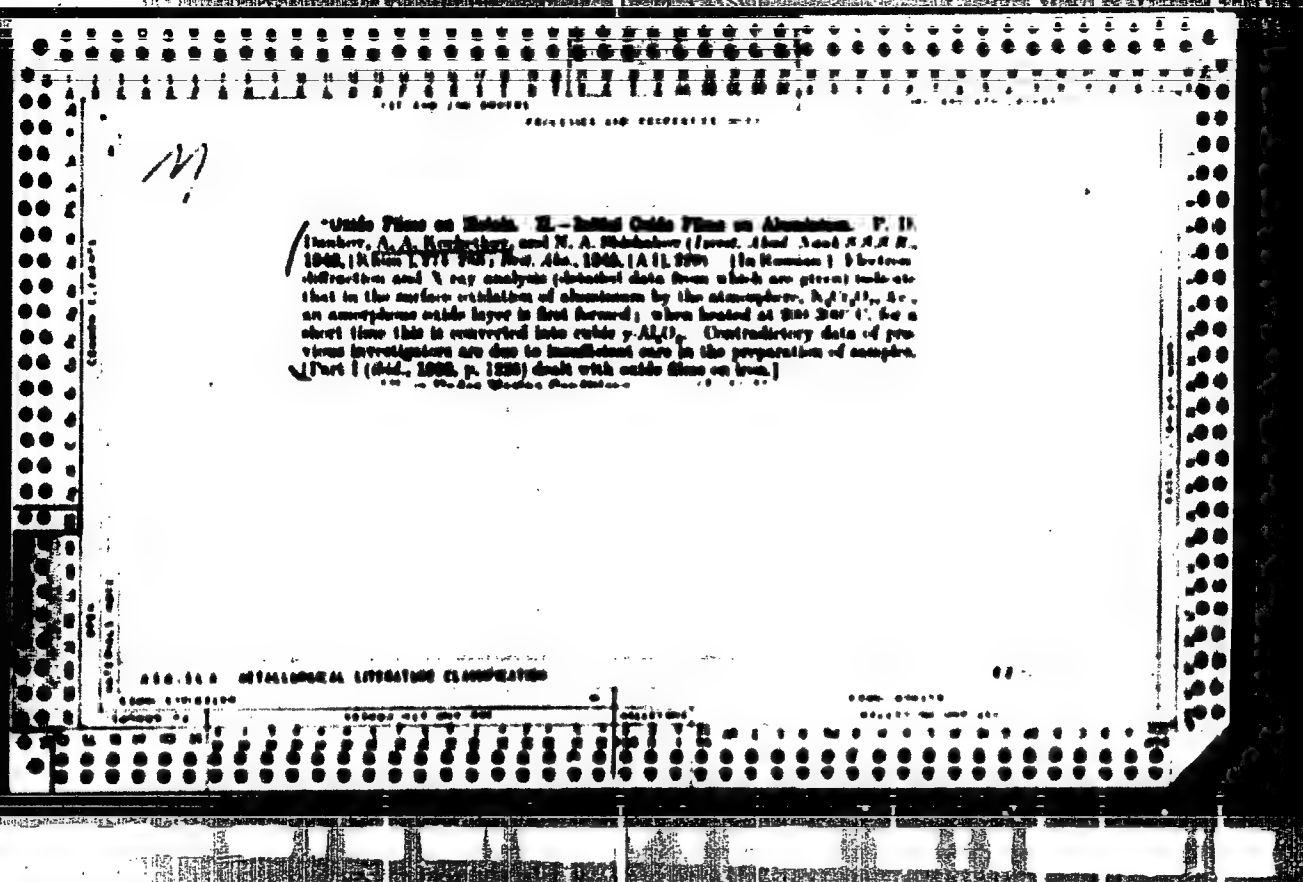
1. Glavnyy inzhener konstruktorskogo byuro Vsesoyuznogo
instituta elektrifikatsii sel'skogo khozyaystva.
(Agricultural machinery) (Stock and stockbreeding)

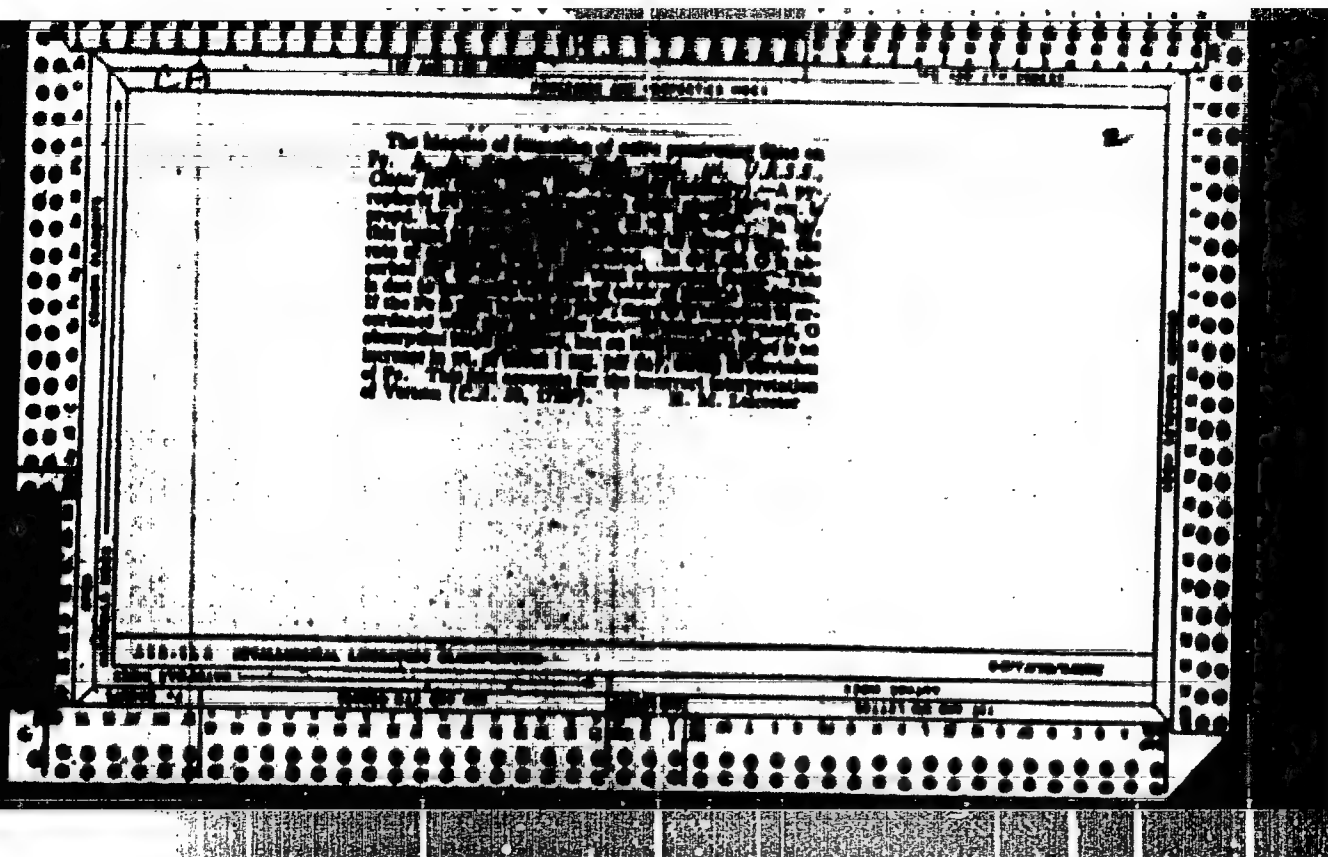
KOZLOVSKIY, V., red.; KOCHETKOV, A., red.; KLYUMEL', A., tekhn. red.

[Corn in Soviet Latvia] Kukurnsa v Sovetskoi Latvii. Riga, Latvianskoe gos. izd-vo, 1960. 218 p. (MIRA 14:11)
(Latvia—Corn (Maize))









KOCHETKOV, Aleksandr Dmitriyevich, podpolkovnik, shurnal'ist; MURAV'YEV,
~~A.I., polkovnik, red.~~ CHAPAYEVA, R.I., tekhn. red.

[Light from atop the hill] Svet s vershiny. Moskva, Voen.isd-vo
M-va obrony SSSR, 1961. 56 p. (MIRA 15:2)
(Soldiers)

KOCHETKOV, A. I.

36353. KOCHETKOV, A. I. -- Ot pervykh uspekhev k novym pobedam (chuguyevsk.
lesozashchitnaya stantsiya khar'k. obl.) les i step', 1949, No. 7, s 57-60

SO: Letopis' Zhurnal' nykh Sta toy, No. 49, 1949

KOCHETKOV, A. I.

Certain theoretical generalisations of the formulas of
spherical and practical astronomy. Trudy TGU 144:125-147
'59. (MIRA 13:1)

(Astronomy)

KOCHETKOV, A. I.

Sep/Oct 53

USSR/Astronomy - Bibliography Dissertations

"Bibliography. Index to Astronomical Literature Published in the USSR in May/June 1953."
Yu. O. Perel'

Astron Zhur, Vol 30, No 5, pp 572-576

Lists 7 monographs (books, brochures, symposia), 3 ephemerides, 9 'Trudy' (Works) of institutions, 34 articles from 16 periodicals, 9 articles from 7 dailies and gazettes, 2 bibliographies, and 4 author abstracts of dissertations. The 4 dissertations are:
1. M. P. Kazachevskiy, Cand Phys-Math Sci, "Photometric Determination of the Reflectivity of the Terrestrial Globe," Alma-Ata, 1953, 8pp, 120 copies, Acad Sci Kazakh SSR, Astrophys Inst. 2. S. O. Slyusarev, Cand Phys-Math Sci, "Wolf-Rayet Stars," Leningrad, 1953, 8pp, 100 copies, Leningrad U in Zhdanov. 3. P. N. Kholopov, Cand Phys-Math Sci, "Structure of Globular Stellar Clusters," Moscow, 1953, 8pp, 110 copies, Moscow State U, Astron Inst in Shternberg. 4. A. I. Kochetkov, Cand Tech Sci, "Development of a New System of Spherical Coordinates and Formulas for the Computation of Astronomical Observations," Moscow, 1953, 100 copies, Moscow Inst of Engineers of Geodesy, Aerial Photography, and Cartography.

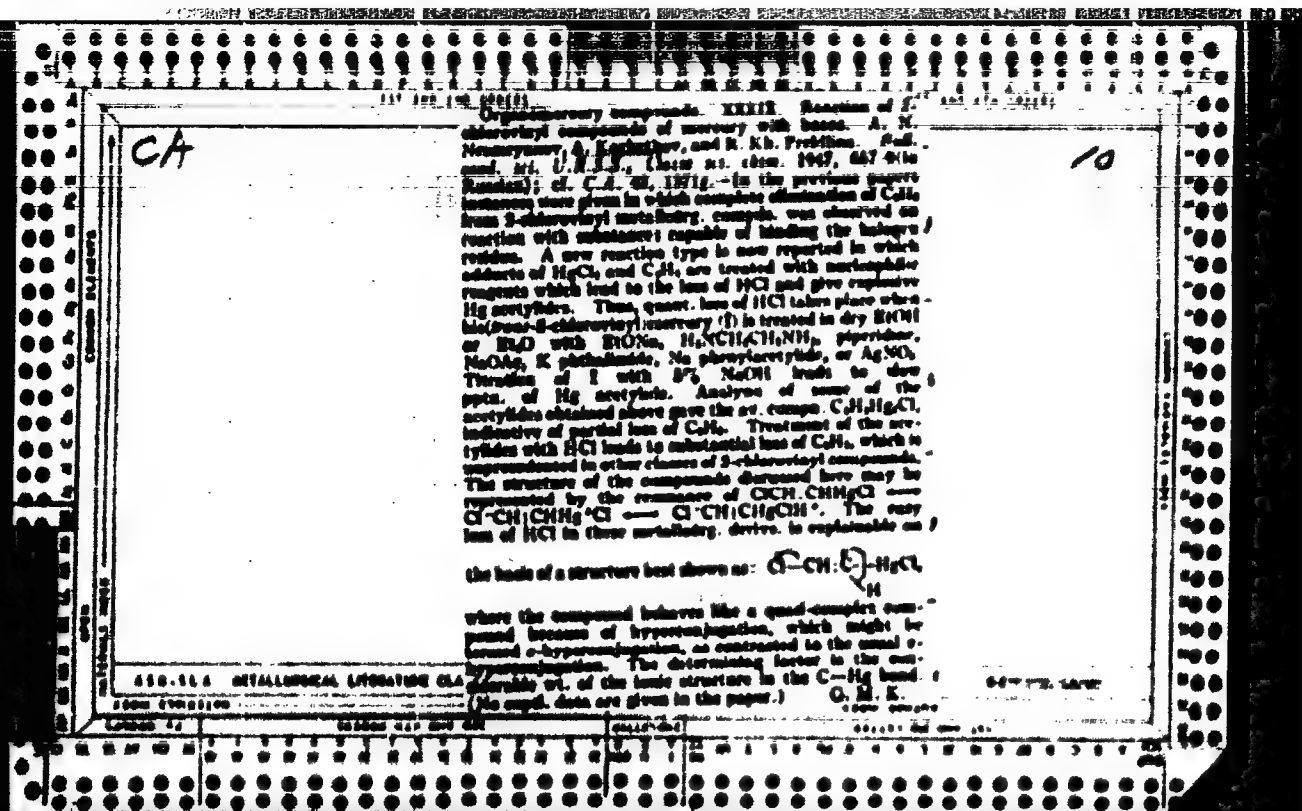
254T76

KOCHETKOV, A.K.; TREUMOV, N.A.

[Casting bronze bushings into a mold with a metal core] Otlivka bronzovykh vtulok v kokil' s metallicheskim sterzhnem. Opyt kollektivnoi stakhanovskoi brigady P.A. Shumova. Kovrovskii ekskavatornyi zavod. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1952. 13 p. (MLRA 6:5)

1. Kovrovskiy ekskavatornyy zavod.

(Founding)



KOCHETKOV, Aleksandr K.

Quasimolecular compounds of thallium. A. K. Kochetkov, A. N. Krasovskiy, and A. N. Krasovskiy. *Izv. Akad. Nauk SSSR Khim. Nauk* 1968, 448-49. To 10 g. TiCl_4 in 20 ml. dry Et_2O was added with shaking at room temp. 10 g. bis(trimethylsilyl)acetylene in 20 ml. Et_2O , after 2 hrs the ppt. was cold, with hot benzene, and the remaining org. layer gave 81% bis(trimethylsilyl)acetylene, m. 122.5°; the final residue was $(\text{C}_6\text{H}_5)_3\text{SiTiCl}_2$ (71.8%) (I), decomp. 167-8° (from Et_2O). Shiny plates, sol. in Me_2CO , MeOH , EtOH , completely sol. in hot water, poorly sol. in cold water and Et_2O , insol. in benzene or petr. ether; addn. of 0.5 g. pyridine to 1 g. of I in 20 ml. EtOH yields $(\text{C}_6\text{H}_5)_3\text{SiTiCl}_2$ (II), decomp. 147.5-50° (from pyridine); m. 122.5-2.5° (from petr. ether, pyridine and, compd., decomp. 122.5-2.5°

(from MeCN 5:1) with a little pyridine). 1.117 g. in 20 ml. MeCN treated with 0.5 g. K_2CO_3 in 15 ml. Et_2O gave an orange, from pyridine $(\text{C}_6\text{H}_5)_3\text{SiTiCl}_2$ (III), m. 171-2° in 75% yield. Shaking 0.5 g. I and 2.1 g. iodine in 60 ml. dry CHCl_3 8 hrs. at room temp. gave, after filtration, decoloration by hypophosphite and drying, 22.4% chlorotellurium, b. 113-15°, n_D^{20} 1.3720, which on treatment with Cl in dry petr. ether gave yellow needles of CHCl_3 CH_2Cl_2 m. 86-7°. Shaking 1.5 g. I and 1 g. Hg in 20 ml. dry MeOH 20 hrs. at room temp. gave 0.4 g. Hg and 0.7 g. TiCl_4 , while the org. m. after drying 40 min. with cold benzene gave 70.6% bis(trimethylsilyl)acetylene. The use of anhydrous I in the ppt. failed to reveal traces of any other m. Addn. of 0.5 g. anhyd. SnCl_4 in 7 ml. MeOH to 1.0 g. I in 10 ml. MeOH , followed by refluxing for several min. and standing 1 hr., gave 60.4% TiCl_4 while the org. layer gave 6.20% bis(trimethylsilyl)acetylene, m. 70.5-71° (from petr. ether). The following reagents on treatment with I gave evolution of C_2H_2 (I° in parentheses): 20% NaOH (33°), EtMgBr (30°), BuLi (30°), heating to 30° (30°) with reaction being vigorous at 100-110° KJ color., 20% HCl and 20% H_2SO_4 give 100% C_2H_2 in a slow reaction. To refluxing soln. of 2.5 g. Ph_3SiCl and 2.5 g. TiCl_4 (11.4) in 20 ml. EtOH was added 15 ml. 20% NaOH and the mixt. heated 5 min.; on cooling, 20 ml. 10% HCl was added and the dried ppt. was cold, with hot pyridine, yielding on cooling 62.2% $\text{Ph}_3\text{SiTiCl}_2$, colorless needles (from pyridine), which do not melt at 210°; reaction of Ph_3SiCl with TiCl_4 in several vol. (anhydrous) by vol. gave 80% $\text{Ph}_3\text{SiTiCl}_2$. (I. M. Krasovskiy)

Inst. Org. Chem, Acad. Sci USSR

KOCHETKOV, A. K.

Mbr., Inst. Org. Chem., Acad. Sci., -1949- (submitted 1 Aug. '49)

"1,6-Addition of Mesitylmagnesium Bromide to the Acetate of Dimethylvinylcarbinol," Is.
Ak. Nauk SSSR, Otdel. Khim. Nauk, No. 6, 1949. Co-authors: Nesmeyanov, A. N., &
Freydlina, R. Kh.

Some new possibilities of synthesis of metalloorganic compounds of lead, tin, and thallium. A. K. Kucheryavskiy and N. N. Pribludnyy (Arad. Ser. 1) *Russ. Chem. Rev.* 1966, 35(2), 1-10. *Abstr. Russ. Chem. Soc.* 1966, 35(2), 1-10. - Compounds of the type R_2SnX_2 may be prepared from the corresponding Pb compounds, and in turn are convertible into Tl analogs. Addition, with ice cooling, of 4.57 g. $Pb(OAc)_2$ to $CHCl_3$ in 10 g. $PbCl_2$, followed by adding 5 hrs, gave 2.5 g. Pb acetate, m. 207-1°, and 2.5 g. $PbCl_2$, m. 207-1° (from the mother liquor). Reducing 4 g. $PbCl_2$ and 2.5 g. $Pb(OAc)_2$ 10 hrs. in dry $CHCl_3$ with a trace of AsH_3 , followed by filtration of the Pb acetate and evaporation, gave 2.7 g. (66%) $Pb_2Pb(OAc)_4$, m. 207-1° (from $CHCl_3$). Reducing 2 g. Pb_2PbCl_4 and 3 g. Hg in dry Me_2C 3 hrs., concn., and extra. with hot Ca , gave 10% Pb_2HgCl_4 , m. 207-1° (from $HgCl_2$). Reducing 5 g. Pb_2PbCl_4 and 5 g. $SnCl_4$ in dry $EtOH$ 10 hrs. gave on filtration and evaporation, followed by extra. with hot ligroin, 2.5 g. Et_2SnCl_4 , m. 84° (81%). A similar reaction with Pb_2PbCl_4 in Me_2C gave in 40 hrs. 13.6% Pb_2SnCl_4 , m. 84°, while Me_2PbCl_4 (in $EtOH$ soln.) gave 47% Me_2SnCl_4 , m. 107-5-88° (from pure ether). Dropwise addition of 1.5 ml. 20% $NaOH$ to 0.5 g. $(p-MeC_6H_4)_2SnCl_4$ and 0.21 g. $TiCl_4(III)$ in 9 ml. boiling $EtOH$, followed by refluxing 5 min. and addition of 5 ml. concn. HCl , gave 66% $(p-MeC_6H_4)_2TiCl_4$, does not m. 300° (from pyridine). Addition of dry Na_2CO_3 (1.8 g.) to 1 g. $(p-EtOC_6H_4)_2SnCl_4$ and 0.78 g. $TiCl_4(III)$ in boiling $EtOH$, followed by treatment with 10 ml. HCl , gave 0.66 g. (46%) $(p-EtOC_6H_4)_2TiCl_4$, does not m. 310° (from pyridine); 27% $NaOH$

instead of Na_2CO_3 gave an impure product. However, addition of 3 ml. 20% $NaOH$ to 0.5 g. $(p-MeC_6H_4)_2SnCl_4$ and 0.46 g. $TiCl_4(III)$ in hot $EtOH$ gave after a careful treatment to the above, 0.7% $(p-MeC_6H_4)_2TiCl_4$, darkens at 280° (from no pyridine). G. M. Kowalski

NESMEYANOV, A. N.; FREYELINA, R. Kh.; KOCHEIKOV, A. K.

Dimethylvinyl Carbinol Acetate

1, 6-Addition of mesitylmagnesium bromide to dimethyl vinylcarbinol acetate. Uch. zap. Mosk. un., No. 132, 1950.

9. Monthly List of Russian Accessions, Library of Congress, October 1957, Uncl.

2

Synthesis of o-Allyl ethers of oximes, "A. I.
 Kuchukov, A. I. Kuchukov, L. M. Trudilina,
 Inst of Org Chem, Acad Sci USSR

The alkyl ether, o-allyl ether, No 5,
 No 512-517

Impured allylurea (I) with alk. and not-
 oxidized in presence of an ethylene to obtain good
 yield of o-allyl ether ethers, easily purified
 by distill, but no H-allyl ether under conditions
 in question. Action of I on H₂ (No 512) gave

19706

Name/chemistry - oxime ethers Reg/Oct 21

(Contd)

The yield of o-allylurea/oxime (II), 97.5-
 99.5%. Impured II with oxime to prep a number
 of o-allyl ether ethers. In all, prep 6 here-
 tofore unknown o-allyl ether ethers.

КОЧЕТКОВ, А. П.

"Propagation of Elastically Viscous-plastic Waves of Shear Upon Transverse Impact Against a Plate." Thesis for degree of Cand. Physicomathematical Sci. Sub 24 Jun 49, Inst of Mechanics, Acad Sci USSR.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

KOCHSTROV, K. M.

150790

USSR/Russias - Elasticity
Mechanics

Mar/Apr 90

"Propagation of Elastoviscoplastic Waves of Displacement (Shear) in a Plate," A. M. Kochetov, *Izv. Akad. Nauk SSSR, Mekh.*, Moscow, 6 pp

"Prikladnaya Matematika" Vol XIV, No 2

Investigates propagation of displacement (shear) waves in infinite plate, possessing elastoviscoplastic properties, for the case where the plate suffers transverse blow by rigid cylinder. Problem was previously considered by P. A. Bakhshiyev,

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USSR/Russias - Elasticity
(Contd)

Mar/Apr 90

whose work employed different stress-strain relations (vide "Viscoplastic Flow for a Blow by a Cylinder on a Plate," *Prikladnaya Matematika*, Vol XIII, No 1, 1986). Submitted 15 Oct 89.

150790

KOCHETKOV, A. M.

166746

Mathematics - Approximation Jul/Aug 50
Physics - Armor Piercing

"Approximate Solution of Certain Problems of
Instationary Motion of a Viscoplastic Medium,"
A. M. Kochetkov, Inst of Mech, Acad Sci USSR,
Moscow

"Trilied Matemati 1 Math" Vol XIV, No 4
pp 43-436

Considers two subject problems: (a) problem
of blow by hard cylinder on plate as originally
studied by P. A. Bakhshyan in "Viscoplastic
Flow in a Blow of a Cylinder on a Plate" in

166746
Mathematics - Approximation Jul/Aug 50
(Contd)

"Trilied Matemati 1 Math" Vol XII, No 1, 1948,
and (b) problem of rotary motion of viscoplastic
medium. Submitted 3 Apr 50.

166746

Исследования в области
Elasticity and Plasticity, Soil Mechanics (1759)

Izvestiya Sbornik, Vol 15, 1953, pp 177-180. "Stress Condition of a Wedge Under the Action of Hydrostatic Pressure."

The problem is solved on the assumption that the material of the wedge is incompressible, and the intensity of stresses S and deformations E are connected by the function $S = kE$ where k and u are constants of the material.

SO: Referativnyy Zhurnal--Matematika, No 1, Jan 54; (W-30785, 28 July 1954)

24.4200

2607, 1327, 1103

27851

S/508/60/029/000/009/012
D225/D303

AUTHOR: Kochetkov, A.M. (Moscow)

TITLE: Determining the pressure on elastic infinite plates,
with an elastic medium pressed between them

PERIODICAL: Akademiya nauk SSSR. Inzhenernyy sbornik, v. 29,
1960, 92-97

TEXT: The aim of the paper is to find the normal component σ of the pressure, perpendicular to the line of contact of the elastic medium pressed between two parallel rough walls. The deformation considered is a plane one. The author considers first the infinite region, bounded by two parallel planes, for which the tangential tension τ_0 on the interval $-1 \leq x \leq 1$ is given. On the infinite intervals $1 \leq x \leq \infty$ and $-\infty \leq x \leq -1$ the walls are perfectly smooth. For such a case the boundary conditions are given by

X

Card 1/7

Determining the pressure ...

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D225/D303

$$\begin{aligned} -\infty < x < \infty, & \quad v^0 = \mp \frac{k}{\sigma_y} \sigma_y^0 \\ -\infty < x < -1, & \quad \tau_{xy} = 0 \\ -1 < x < 1, & \quad \tau_{xy} = \mp \tau_0 \\ 1 < x < \infty, & \quad \tau_{xy} = 0 \end{aligned} \quad (1)$$

Functions of the tension are taken in the form of Fourier integrals

$$\varphi(x, y) = \int_{-\infty}^{\infty} F_1(\alpha, y) \cos \alpha x \, d\alpha + \int_{-\infty}^{\infty} F_2(\alpha, y) \sin \alpha x \, d\alpha \quad (2)$$

Card 2/7

Determining the pressure ...

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D/225/D303

where $P_1(x,y)$ satisfies

$$P_1(\alpha, y) = A_1 \operatorname{ch}(\alpha y) + B_1 \operatorname{sh}(\alpha y) + C_1(\alpha y) \operatorname{ch}(\alpha y) + D_1(\alpha y) \operatorname{sh}(\alpha y) \quad (3)$$

Tension components then have the form

$$\begin{aligned} \sigma_x^0 &= \int_{-\infty}^{\infty} F_1(\alpha, y) \cos \alpha x d\alpha + \int_{-\infty}^{\infty} F_2(\alpha, y) \sin \alpha x d\alpha, \\ \sigma_y^0 &= - \int_{-\infty}^{\infty} \alpha^2 F_1(\alpha, y) \cos \alpha x d\alpha - \int_{-\infty}^{\infty} \alpha^2 F_2(\alpha, y) \sin \alpha x d\alpha, \\ \tau_{xy}^0 &= \int_{-\infty}^{\infty} \alpha F_1'(\alpha, y) \sin \alpha x d\alpha - \int_{-\infty}^{\infty} \alpha F_2'(\alpha, y) \cos \alpha x d\alpha. \end{aligned} \quad (4)$$

Card 3/7

Determining the pressure ...

27851
S/508/60/029/000/009/012
D225/D303

By substitution of expression (4) and

$$\begin{aligned}
 E u^0 &= \int_{-\infty}^{\infty} \left[F_1'(a, y) + \mu a^2 F_1(a, y) \right] \frac{\sin ax}{a} da - \\
 &- \int_{-\infty}^{\infty} \left[F_2'(a, y) + \mu a^2 F_2(a, y) \right] \frac{\cos ax}{a} da, \quad (5) \\
 E v^0 &= - \int_{-\infty}^{\infty} \left[(2 + \mu) F_1'(a, y) - \frac{1}{a^2} F_1'''(a, y) \right] \cos ax da - \\
 &- \int_{-\infty}^{\infty} \left[(2 + \mu) F_2'(a, y) - \frac{1}{a^2} F_2'''(a, y) \right] \sin ax da.
 \end{aligned}$$

Card 4/7

27851

8/508/60/029/000/009/012
D225/D303

Determining the pressure ...

into the boundary solutions (1) for $y = \pm h$ some equations are obtained which, after using Fourier's identity, lead to equations, from which coefficients

$$A_1 = B_1 = C_1 = D_1 = B_2 = C_2 = 0$$

$$A_2 = \frac{\sin \alpha l}{\alpha^3} [2 \sinh \alpha h - (1+\mu)(\sinh \alpha h + \alpha h \cosh \alpha h) - k \alpha^2 h \sinh \alpha h]$$

$$D_2 = \frac{\sin \alpha l}{\alpha^3} [(1+\mu) \sinh \alpha h + k \alpha h \cosh \alpha h] \quad (10)$$

are found. The components of tensions are then expressed by formulae
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$$\begin{aligned}\sigma_x &= \int_{-\infty}^{\infty} a^3 [(A_2 + 2D_2) \cosh ay + D_2 ay \sinh ay] \sin ax \, da, \\ \sigma_y &= - \int_{-\infty}^{\infty} a^3 [A_2 \cosh ay + D_2 ay \sinh ay] \sin ax \, da, \\ \sigma_{xy} &= - \int_{-\infty}^{\infty} a^3 [(A_2 + D_2) \sinh ay + D_2 ay \cosh ay] \cos ax \, da.\end{aligned}\tag{11}$$

In a similar way the solution is found for the region bounded by two elastic, perfectly smooth walls pressed at the infinity by a uniformly spread load with intensity σ . The component σ_{y0} along the line of contact i.e. for $y = \pm h$ could be represented by

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$$\sigma_{y0} = -\frac{\mu}{1+\mu} (q_0 + \dots) - \frac{2}{\pi} \{ (1-\mu) I_1(\xi) - (1+\mu) I_2(\xi) \} \quad (13)$$

where

$$I_1(\eta) = \int_0^{\eta} \frac{\sin \beta \operatorname{ch} \beta \sin \beta \eta \sin \beta \xi}{\Delta} d\beta,$$

$$I_2(\eta) = \int_0^{\eta} \frac{\sin \beta \eta \sin \beta \xi}{\Delta} d\beta,$$

$$\Delta = 2 \operatorname{sh}^2 \beta + \eta^2 (\beta + \operatorname{sh} \beta \operatorname{ch} \beta).$$

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AUTHOR: Kochetkov, A. N.

TITLE: Extremum problems for analytic functions with a positive real part satisfying some additional conditions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 3, 1963, 508-511

TEXT: A real Banach space E , a continuous convex functional $p(x)$ over E , a set of indices I , a subset $X = (x_\nu: \nu \in I)$ of E and a set of real numbers $a_\nu (\nu \in I)$ are considered. The problem

$$f(x) \leq p(x), x \in E; f(x_\nu) \geq a_\nu, \nu \in I \quad (A)$$

is called consistent if it has at least one linear functional f as solution. The set of solutions of (A) is designated by Q_A . The most important result of the study is

$$\max_{f \in Q_A} f(y) = \inf \left\{ p\left(y + \sum_i \lambda_i x_i\right) - \sum_i \lambda_i a_i \right\}; \quad (5)$$

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Extremum problems for analytic ...

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It characterizes the method the author uses to solve the problem (A).

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